

# Impact Energy Absorbing Matrix

Completed Technology Project (2017 - 2018)



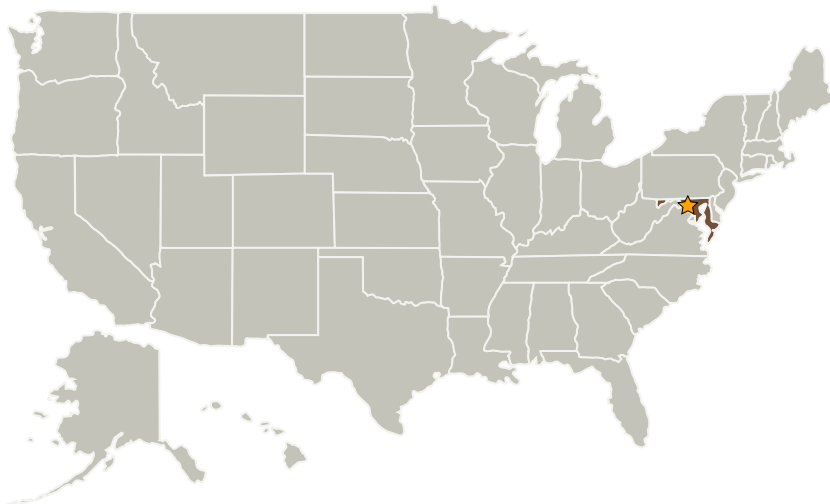
## Project Introduction

The goal of this IRAD is to produce a printed energy absorbing prototype that can be characterized and validated.

## Anticipated Benefits

This research seeks to develop an energy absorption product that can be deterministically characterized, easily producible, tunable to the changing requirements of planetary landers. This technology would be transferable to many other energy absorption applications beyond planetary probes.

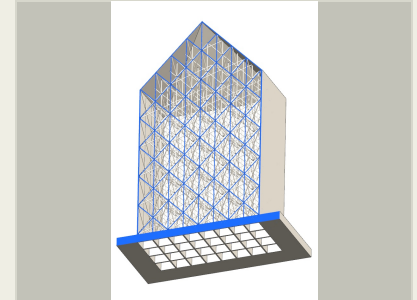
## Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Goddard Space Flight Center (GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

### Primary U.S. Work Locations

Maryland



Printed Matrix Conceptual Illustration

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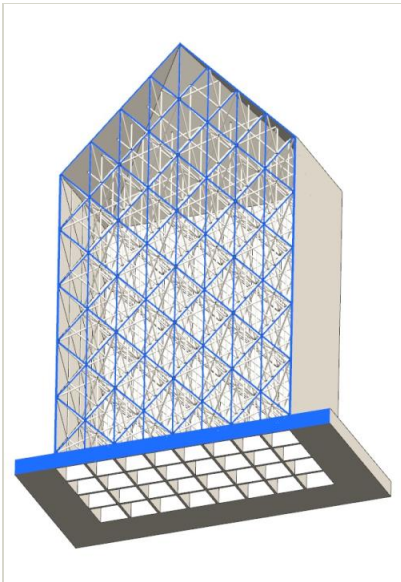
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## Images



### Printed Matrix Conceptual Illustration

Printed Matrix Conceptual Illustration  
(<https://techport.nasa.gov/image/28334>)

## Organizational Responsibility

### Responsible Mission Directorate:

Mission Support Directorate (MSD)

### Lead Center / Facility:

Goddard Space Flight Center (GSFC)

### Responsible Program:

Center Independent Research & Development: GSFC IRAD

## Project Management

### Program Manager:

Peter M Hughes

### Project Managers:

Brook Lakew  
Michael J Amato

### Principal Investigator:

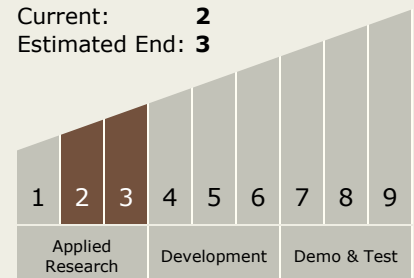
Andrew L Jones

## Technology Maturity (TRL)

Start: 2

Current: 2

Estimated End: 3



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## Technology Areas

### Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
  - └ TX12.5 Structural Dynamics
    - └ TX12.5.3 Shock & Impact

## Target Destinations

The Moon, Mars, Others Inside the Solar System